

## Claims

What is claimed is:

- 1           1.    An awning for mounting on a wall, said  
2    awning comprising:  
3           a roll-up tube;  
4           a drive assembly at least partially inserted  
5    into said roll-up tube for deploying and retracting  
6    said awning; and  
7           a solar panel for generating electrical power  
8    for powering said drive assembly.
- 1           2.    The awning of claim 1, further comprising a  
2    rechargeable battery for storing said electrical power  
3    and for powering said drive assembly.
- 1           3.    The awning of claim 1, wherein said solar panel  
2    is fixedly mounted on the wall.
- 1           4.    The awning of claim 1 for installing on a  
2    building or vehicle, wherein no connection to an  
3    electrical system of the building or vehicle is necessary  
4    to operate said awning.
- 1           5.    An awning comprising:  
2           a roll-up tube;  
3           a canopy attached to said roll-up tube;  
4           a drive assembly for deploying or retracting said  
5    awning;  
6           a solar panel fixedly mounted on a wall for  
7    generating electrical power for powering said drive  
8    assembly.

1           6.    The awning of claim 5, wherein said motorized  
2 drive assembly is at least partially inserted into said  
3 roll-up tube.

1           7.    The awning of claim 5, further comprising a  
2 rechargeable battery for storing said electrical power  
3 for powering said drive assembly.

1           8.    The awning of claim 5, further including a wall  
2 mounting assembly fixedly mounted on the wall, wherein  
3 said roll-up tube is rotatably fixed to said wall  
4 mounting assembly.

1           9.    The awning of claim 5 for installing on a  
2 building or vehicle, wherein no connection to an  
3 electrical system of the building or vehicle is necessary  
4 to operate said awning.

1           10.   An awning comprising:  
2           a wall mounting assembly fixed to a wall, said wall  
3 mounting assembly including a roll-up tube rotatably  
4 attached to said wall mounting assembly;  
5           a canopy rod;  
6           a canopy having an inner end connected to said roll-  
7 up tube and an outer end connected to said canopy rod;  
8           a support arm including:  
9               a first end connected to the wall;  
10              a second end connected to said canopy rod;  
11              at least one joint assembly between said first  
12 end and said second end; and  
13              a biasing spring for biasing said support arm  
14 outward from the wall about said joint assembly;

15           a drive assembly for deploying or retracting said  
16 awning;  
17           a rechargeable battery for providing electrical  
18 power for powering said drive assembly; and  
19           a solar panel for generating electrical power for  
20 storing in said rechargeable battery and/or for powering  
21 said drive assembly.

1           11. The awning of claim 10, wherein said solar  
2 panel is fixedly mounted on one of the wall or said wall  
3 mounting assembly.

1           12. The awning of claim 11, wherein said drive  
2 assembly is at least partially inserted into said roll-up  
3 tube.

1           13. The awning of claim 10, wherein said drive  
2 assembly is at least partially inserted into said roll-up  
3 tube.

1           14. The awning of claim 10 for installing on a  
2 building or vehicle, wherein no connection to an  
3 electrical system of the building or vehicle is necessary  
4 to operate said awning.

1           15. An awning comprising:  
2           a wall mounting assembly fixed to a wall;  
3           a first and a second support arm each connected to  
4 the wall;  
5           a roll-up tube rotatably attached to said first  
6 support arm at one end of said tube;

7       a canopy having an inner end connected to said wall  
8 mounting assembly and an outer end connected to said  
9 roll-up tube;  
10       a drive assembly attached to said second support arm  
11 and at least partially inserted into another end of said  
12 roll-up tube for deploying or retracting said awning;  
13       a rechargeable battery for providing electrical  
14 power for powering said drive assembly; and  
15       a solar panel for generating electrical power for  
16 storing in said rechargeable battery and/or for powering  
17 said drive assembly.

1       16. The awning of claim 15, wherein said solar  
2 panel is fixedly mounted on said wall mounting assembly.

1       17. The awning of claim 15 for mounting on a wall  
2 of a building or vehicle, wherein no connection to an  
3 electrical system of the building or vehicle is necessary  
4 to operate said awning.

1       18. An awning comprising:  
2       a roll-up tube rotatably fixed to a wall;  
3       a canopy rod;  
4       a canopy having an inner end connected to said roll-  
5 up tube and an outer end connected to said canopy rod;  
6       a support arm including:  
7           a first end connected to the wall;  
8           a second end connected to said canopy rod;  
9           at least one joint assembly; and  
10          a biasing spring for biasing said support arm  
11 outward from the wall about said joint assembly;

12           a drive assembly at least partially inserted into  
13 said roll-up tube for deploying or retracting said  
14 awning;  
15           a rechargeable battery for providing electrical  
16 power for powering said drive assembly; and  
17           a solar panel for generating electrical power for  
18 storing in said rechargeable battery and/or for powering  
19 said drive assembly.

1           19. The awning of claim 18 for installing on a  
2 building or vehicle, wherein no connection to an  
3 electrical system of the building or vehicle is necessary  
4 to operate said awning.

1           20. An awning comprising:  
2           a wall mounting assembly mounted on a wall;  
3           a first and a second support arm each attached to  
4 the wall;  
5           a roll-up tube having one end connected to said  
6 first support arm;  
7           a canopy having an inner end connected to said wall  
8 mounting assembly and an outer end connected to said  
9 roll-up tube;  
10          a drive assembly attached to said second support arm  
11 and at least partially inserted into another end of said  
12 roll-up tube for deploying or retracting said awning;  
13          a rechargeable battery for providing electrical  
14 power for powering said drive assembly; and  
15          a solar panel fixedly mounted on said wall mounting  
16 assembly for generating electrical power for storing in  
17 said rechargeable battery and/or for powering said drive  
18 assembly.

1           21. The awning of claim 20 for installing on a  
2 building or vehicle, wherein no connection to an  
3 electrical system of the building or vehicle is necessary  
4 to operate said awning.

1           22. An awning comprising:  
2 a roll-up tube rotatably fixed to a wall;  
3 a canopy rod;  
4 a canopy having an inner end connected to said roll-  
5 up tube and an outer end connected to said canopy rod,  
6 wherein said canopy can be wound on said roll-up tube by  
7 rotating said tube in a wind direction for retracting  
8 said awning and unwound from said roll-up tube by  
9 rotating said tube in an unwind direction to deploy said  
10 awning;

11           at least two support arms, each support arm  
12 including:

13                 a first end connected to the wall;  
14                 a second end connected to said canopy rod; and  
15                 at least one joint assembly, wherein at least  
16 one support arm further includes a biasing spring  
17 for biasing said support arm outward from the wall  
18 about said joint assembly;

19           wherein said outward biasing of said support arms  
20 tends to deploy said awning and keep said canopy taught  
21 when said roll-up tube is rotated in an unwind direction  
22 to deploy said awning;

23           a motorized drive assembly at least partially  
24 inserted into said roll-up tube, wherein said drive  
25 assembly is for winding or unwinding said roll-up tube;

26           a rechargeable battery for providing electrical  
27 power to said drive assembly; and

28           a solar panel for generating electrical power for  
29 storing in said rechargeable battery and/or for powering  
30 said drive assembly.

1           23. The awning of claim 22 for installing on a  
2 building or vehicle, wherein no connection to an  
3 electrical system of the building or vehicle is necessary  
4 to operate said awning.

1           24. The awning of claim 22, wherein said solar  
2 panel is fixedly mounted on the wall.

1           25. An awning comprising:  
2           a wall mounting assembly fixed to a wall;  
3           a roll-up tube rotatably fixed to said wall mounting  
4 assembly;  
5           a canopy rod;  
6           a canopy having an inner end connected to said roll-  
7 up tube and an outer end connected to said canopy rod,  
8 wherein said canopy can be wound on said roll-up tube by  
9 rotating said tube in a wind direction for retracting  
10 said awning and unwound from said roll-up tube by  
11 rotating said tube in an unwind direction to deploy said  
12 awning;  
13          at least two support arms, each support arm  
14 including:  
15           a first end connected to the wall;  
16           a second end connected to said canopy rod; and  
17           at least one joint assembly;  
18          a motorized drive assembly at least partially  
19 inserted into said roll-up tube and rotationally  
20 connected to said roll-up tube, wherein said drive

21 assembly is for winding or unwinding said roll-up tube to  
22 deploy or retract said awning;  
23 a rechargeable battery for providing electrical  
24 power to said drive assembly; and  
25 a solar panel fixedly mounted on said wall mounting  
26 assembly for generating electrical power for storing in  
27 said rechargeable battery and/or for powering said drive  
28 assembly.

1 26. The awning of claim 25 for installing on a  
2 building or vehicle, wherein no connection to an  
3 electrical system of the building or vehicle is necessary  
4 to operate said awning.

1 27. An awning comprising:  
2 a roll-up tube;  
3 a drive assembly at least partially inserted  
4 into said roll-up tube for deploying and retracting  
5 said awning; and  
6 a support arm connected to a wall, said support  
7 arm including a spring for biasing said support arm  
8 in an outward direction to deploy said awning.

1 28. The awning of claim 27, wherein said spring is  
2 a torsion spring.

1 29. The awning of claim 27, wherein said spring is  
2 a linear spring.

1 30. The awning of claim 27, further comprising a  
2 solar panel for generating electrical power for powering  
3 said drive assembly.



1           31. The awning of claim 30, further comprising a  
2 rechargeable battery for storing said electrical power  
3 and for powering said drive assembly.

1           32. The awning of claim 32, wherein said solar  
2 panel is fixedly mounted on the wall.